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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/970,621	10/05/2001	Takashi Tanaka	2001_1507A	1393

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WASHINGTON, DC 20006-1021

EXAMINER

WILSON, LEE D

ART UNIT	PAPER NUMBER
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3723

DATE MAILED: 04/18/2003

21

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/970,621

Applicant(s)

TANAKA ET AL.

Examiner

LEE D WILSON

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____ 6) ☐ Other: ____

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DETAILED ACTION

Claim Rejections - 35 USC § 112

1. Claims 9-10 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

a. The equation Q/V does not make sense because how does dividing one velocity by another going to show anything but the mathematical result of division. If one had a mud and rock mix moving at the same speed or velocity (speed and direction) what does it prove to divide the velocity of the rocks by the mud and rocks which should be the same as the composite mud and rocks. The slurry enters the tank the rocks will begin to sink after the slurry begins to fill up the tank.

b. The application never explains what is the exact value of Q/V ? There should be some type of formula which has clear perimeters being explained. The values should be plugged in and used to get the same result everytime. What is variable for the horizontal section area? There should be some constant based of the viscosity of slurry that is used to predict what speed of the sedimentation is suppose to settle.

c. The equation is just being mixed in with some conditions that are just stated and not properly accounted for in the equation. This would make more sence if it was some method

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which has a sequence of steps that cause a result but when you put in an equation it must be thoroughly explained. For example $E=mc^2$ is not just listed but a detailed proof of how all the perimeters are used in the equation is worked out in pages of calculations. This may not be necessary here but the point is variables cannot be discussed in combination with an equation that is not even fully explained. There is not even a value for the result of the equation. What about a computer algorithm if an equation is used each variable is explained in a line of code.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 11 are rejected under 35 U.S.C. 102(a) as being anticipated by Katsumata et al (6161533).

Katsumata et al teach a method comprising of supplying a slurry from a feeding system (21), a tank (2), a pump (p22), and a controller (C1, the pump is suspended unless the device is operation with the detected values operationg the system opening up and deliverying slurry, col.4, lines 36-39).

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In regard to claim 11, the method is anticipated because slurry will always move faster than the sediment of the particle because the slurry would have slow down because particles would have separate after the gravity pulls the particles separating from liquid and particles parts.

4. Claims 1-3 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyata et al (5799643).

Miyata et al teach a method comprising of supplying a slurry from a feeding system (21), a tank (2), a pump (p22), and a controller (C1, the pump is suspended unless the device is operation with the detected values operationg the system opening up and delivering slurry, col.4, lines 31-34).

In regard to claim 11, the method is anticipated because slurry will always move faster than the sediment of the particle because the slurry would have slow down because particles would have separate after the gravity pulls the particles separating from liquid and particles parts.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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6. Claims 1-6 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over White (6475070) in view of Miyata et al (5799643)

a. White teaches a chemical mechanical polishing system comprising a slurry and polishing tables.

b. White does not teach a slurry having a tank, pump means, and control system.

c. Miyata et al a method comprising of supplying a slurry from a feeding system (21), a tank (2), a pump (p22), a controller (C1, the pump is suspended unless the device is operation with the detected values operationg the system opening up and delivering slurry, col.4, lines 31-34) which is used to provide automation control of the slurry supply to allow for strict control over delivery.

d. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the White device by providing a slurry having a tank, pump means, and control system as taught by Miyata et al which is used to provide automation control of the slurry supply to allow for strict control over delivery.

e. In regard to claim 11, the method is anticipated because slurry will always move faster than the sediment of the particle because the slurry would have slow down because particles would have separate after the gravity pulls the particles separating from liquid and particles parts.

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7. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over White (6475070) as applied to claims 1-6 and 11 above, and further in view of Laursen (US2002/0173232 A1).

- a. White is discussed above.
- b. White does not teach a method of mixing deionized water and slurries in a tank.
- c. Laursen teaches a chemical mechanical polishing apparatus teaching the method of mixing deionized water and slurries which allows slurry concentrations to be altered using a deionized water. This reference also teaches inherently that it would be obvious to mix the slurry and deionized water in the slurry tank to obtain various slurry concentrations.
- d. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the White device by providing mixing deionized water and slurries in a tank as taught by Laursen which allows slurry concentrations to be altered using a deionized water.

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Conclusion

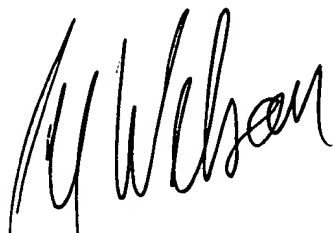
8. While the Examiner might speculate as to what is meant by the claim language, the uncertainty provides the Examiner with no proper basis for making the comparison between that which is claimed and the prior art. Rejections under 35 U.S.C. § 103 should not be based upon considerable speculation as to the meaning of terms employed and assumptions as to the scope of the claims. *In re Steele*, 134 USPQ 292. When no reasonably definite meaning can be ascribed to certain terms in a claim, the subject matter does not become obvious, but rather the claim becomes indefinite. *In re Wilson*, 165 USPQ 494. **No art has been applied to claims 9-10 in view of the 112 first paragraph rejections.**

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kimura et al disclose a device.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lee Wilson whose telephone number is (703) 305-4094.

ldw

April 9, 2003


LEE D. WILSON
PRIMARY EXAMINER